

Impact case study (REF3b)

Institution: Newcastle University
Unit of Assessment: UoA 3
Title of case study: Reform of the NHS dental contract
<p>1. Summary of the impact</p> <p>Research carried out at Newcastle University in the mid-1990s showed that the dental health profile of older people was changing rapidly: the number of people with no natural teeth was falling and a cohort of people with complex restoration needs had emerged as an important patient group. Those trends were confirmed by analysis of the 1998 Adult Dental Health Survey data, with further changes shown in children in 2003. It became clear to policymakers that substantial reform of NHS dental services in England would be required if the projected future needs of the population were to be met. The 2009 Steele review of NHS dentistry analysed the problems with the existing dental contract, from which a set of recommendations for public policy reform were put forward, which have now been adopted into a prototype NHS dental contract which is currently being piloted.</p>
<p>2. Underpinning research</p> <p><u>Key Newcastle University researchers</u></p> <ul style="list-style-type: none"> • Professor Jimmy Steele, initially a Clinical Lecturer and from 2003 a Clinical Professor in the Department of Dental Sciences • Professor Angus Walls, at the time of the research a Professor in the Department of Dental Sciences but left Newcastle University 31st December 2012. • Dr Richard Holmes, initially a Research Fellow and from 2006 an Honorary Clinical Lecturer in Dental Sciences • Dr Cath Exley (2003-2006 lecturer, 2009-date senior lecturer) • Professor Cam Donaldson (Professor at Newcastle University 2002-2010, visiting Professor 2010-2012) <p><u>The oral health of older people</u></p> <p>Newcastle researchers Steele and Walls began studying oral health trends in the early 1990s. The initial focus of their research was the oral health of older people; in 1996 they published the results of a major survey of over 2200 people aged 60 years and over in England (R1). It showed that there were higher levels of tooth retention among those reaching retirement age than had ever been observed before, with potential implications for services. Following that study, Steele and Walls led the oral health component of the 1998 National Diet and Nutrition Survey for people aged 65 and over (R2), which confirmed that these trends were observed across the UK. The increased retention of natural teeth in older people was particularly striking, but the data also illustrated a clear relationship between diet and oral health in older people, which had clear implications for policies designed to achieve good health in a rapidly ageing population.</p> <p><u>National Dental Health Surveys</u></p> <p>Steele was the lead clinical author of the 1998 Adult Dental Health Survey report (R3) and was a major contributor to the 2003 Children's Dental Health Survey. He also played a leading role in the 2009 Adult survey, working with the Office for National Statistics and a wider dental consortium, jointly authoring the Executive Summary and much of the additional content (R4). In the course of his early work on older people, Steele: 1) developed the analytic approaches for projecting trends that he subsequently used in the national work; and 2) identified some of the important emerging oral health trends. The national surveys substantially extended public policymakers' understanding of what proved to be a complex and rapidly changing pattern of oral health in the UK population. That change, which is ongoing, is characterised by the emergence of a cohort of people in late middle age who are ageing with high dental maintenance needs and care costs, and of a younger cohort that is much healthier and which is growing in size. In the latter group, decay rates have reduced markedly, but there are still major dental health inequalities. Overall, only 31% of adults now have decay into dentine and only 6% have no teeth, though there are significant dental health inequalities among all adults as well. In contrast, the prevalence of periodontal disease has</p>

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increased slightly. On the basis of the national data, the population profile over the next 20 years or more can now be predicted with confidence on several measures (R4). The data indicate a need to shift resources and labour towards dealing with the increasingly complex and expensive needs of older people, while maintaining the improvements in the young through prevention.

Healthcare economics

Recognising the implications of emerging oral health trends and the practical problems with the 2006 NHS dental contract, Steele and Holmes collaborated with Exley and Donaldson on research into the management of resources within dental services. In 2008, the researchers published a paper in the *British Dental Journal* describing how managers in primary care organisations often engaged poorly with dental practitioners and public health consultants, who help to match contracted services with local needs (R5). Another study, published in 2009, showed that there was a lack of economics expertise within the commissioning arm of primary care organisations, and highlighted room for improvement in the way NHS resources are allocated to maximise local oral health (R6).

3. References to the research

(Scopus citation data at as 31.7.13, Newcastle researchers highlighted in **bold**)

- R1. **Steele JG, Walls AW, Ayatollahi SM, Murray JJ** (1996). Major clinical findings from a dental survey of elderly people in three different English communities. *Br Dent J.* 180(1):17-23. DOI:10.1038/sj.bdj.4808951. **47 citations.**
- R2. **Steele JG**, Sheiham A, Marcenes W, **Walls AWG** (1998). National diet and nutrition survey: people aged 65 years and over. Volume 2: Report of the oral health survey. *London: The Stationery Office.*
- R3. Kelly M, **Steele JG**, Nuttall N, Bradnock G, Morris J, Nunn J et al. (2000). Adult Dental Health Survey: Oral health in the United Kingdom 1998. *London: The Stationery Office.*
- R4. **Steele JG**, O'Sullivan I (2011). Executive Summary: Adult Dental Health Survey 2009. *London: The NHS Information Centre for Health and Social Care.* Full report series available online at: <http://www.hscic.gov.uk/pubs/dentalsurveyfullreport09>
- R5. **Holmes RD, Donaldson C, Exley C, Steele JG** (2008). Managing resources in NHS dentistry: the views of decision-makers in primary care organisations. *Br Dent J.* 205(6):E11. DOI: 10.1038/sj.bdj.2008.755. **1 citation.**
- R6. **Holmes RD, Bate A, Steele JG, Donaldson C** (2009). Commissioning NHS dentistry in England: issues for decision-makers managing the new contract with finite resources. *Health Policy* 91(1):79-88. DOI: 10.1016/j.healthpol.2008.11.007. **1 citation.**

Select research grants

- Department of Health. 1995-1998. £134 000 Newcastle component. *National diet and nutrition survey (people aged 65 and over)*
- Office for National Statistics. 1998-2000. £52 600 Newcastle component. *Adult dental health survey 1998.*
- Office for National Statistics. 2009–2011. £124 000 Newcastle component. *Adult Dental Health Survey.*

Medical Research Council. 2006-2008. £174 000 Newcastle component. *Influences on Negotiating Clinical Needs and Decision Making.*

4. Details of the impactDental services for older people

Public services, including dental services, must adapt to the rapid demographic change associated with the ageing population. The British Dental Association (BDA) has promoted changes to public policy to meet this challenge. Steele was a member of the BDA's Expert Reference Group that in 2003 wrote the Key Issue Policy Paper BDA Oral Healthcare for Older People 2020 Vision (Ev a), which draws on R1 and R2 in making recommendations such as integration of dentistry with other health services for older people, and changing the professional training curriculum to allow practitioners to cope with an increasing caseload of older people. Progress on implementation of the policy paper's recommendations was detailed in a 2012 report produced by the BDA (Ev b),

which found that seven of 21 recommendations had been met and another six deemed partially met (Ev b).

The pathway to a new NHS dental contract

The majority of adults in the UK receive dental care from the NHS: a 2009 survey indicated that 31.7 million adults (82% of the adult population) had seen an NHS dentist in the preceding two years. Therefore, it is essential that NHS dentistry is properly configured to meet the current and projected future needs of the population.

In 2008, the UK parliament health select committee published a report detailing major problems with the dental contract in place at the time. They found that while the 2006 dental contract had moved away from the fee-per-item payment model, it was still too focused on treatment activity and not enough on prevention. In response to the select committee's findings, the Secretary of State for Health invited Steele, with his background of research on oral health trends and health economics, to lead an independent review of NHS dental services in England in early 2009 (Ev c).

Steele's 2009 review of NHS dentistry (Ev d) drew on a range of sources including the 1998 adult dental health survey (R3), the 2003 child dental health survey, and economic research by Steele and colleagues at Newcastle University (R5). The epidemiologic data describing the change in oral health trends (see section 2) directly underpin the review's recommendations of a shift in payment model from one that encourages treatment activity to one that favours high-quality preventive care; from fee-per-item to capitation and quality provision. The review recognised that the younger population, with better oral health, required fewer resources; these funds could then be redirected to treat the older population, with poorer dental health.

NHS dental contract reform programme

Since its publication, Steele's review has substantially influenced policy debate on NHS dentistry. It has influenced UK Parliament discussions on NHS dental services in Commons debate and written answers (see Hansard records for 1 July, 14 October and 3 November 2009, Ev e). In 2010, the coalition government announced a redesign of the NHS dental contract, which would be based on the recommendations in Steele's review. Both the reasoning behind this decision and the strategy for redesign were explained in the Department of Health document *NHS Dental Contract: Proposals for Pilots* (published December 2010, Ev f):

"When the NHS was founded ... the main work of NHS dentistry was the extraction of decayed teeth, and the creation of dentures. Since then, the oral health of the population has changed."

"Today [16 December 2010] we are publishing our proposals for pilots. We have developed them with the advice and support of a group of experts, including representatives of the British Dental Association, and Professor Jimmy Steele, author of an independent review of NHS dentistry."

Components of the new dental contract are currently being tested on a large scale; specifically, variants of the payment model are being applied to a number of different practices around England. The process began in July 2011 and, as of June 2013, 90 practices overall are taking part (Ev g). This equates to approximately 35 000 patient treatment sessions per week (based on mean data for the UK). An October 2012 assessment of the early findings reported that staff felt better able to offer appropriate care (EV h, pg 21).

The Head of Dentistry and Eye Care Services at the Department of Health confirmed (Ev i) that Steele's research underpins the design of the NHS dental contract pilots: *"Research by Professor Jimmy Steele and colleagues at Newcastle University underpins the design of the new NHS dental contract pilots. Original research on the oral health of older people... and Professor Steele's major contributions to the 1998 and 2009 Adult Dental Health Surveys and the 2003 Children's Dental Health Survey have been influential... This [Steele and Walls' epidemiologic data] pointed to a need to reform NHS dentistry so that a much greater emphasis on preventive care rather than just high levels of treatment activity is encouraged and the health benefits of NHS dentistry maximised."*

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As a consequence of the 2009 independent review, commissioning of NHS dental services has been reformed. Economics research in Newcastle and subsequent work as part of the review identified that a lack of expertise in dental commissioning was affecting the quality and effective use of resources in dentistry. Dental commissioning responded to these specific findings by moving towards expert and specialist commissioning on a larger scale. The Chief Dental Officer for NHS England and the Department of Health confirms that Newcastle work has underpinned this change (EV j): “... researchers at Newcastle University, led by Steele (Holmes et al. 2008... [R5], Holmes et al 2009 [R6] have been part of that growing understanding [of approaches to commissioning]. This work along with the widely cited epidemiological data published by Steele and colleagues...went on to inform the recommendations that emerged from that review.”

In summary, research carried out at Newcastle University that found a change in the trends in oral health led to aspects of a new dental contract being tested in pilots. The success of these initial pilots resulted in a national reform of the NHS dental contract.

5. Sources to corroborate the impact

- Ev a. Oral Healthcare for Older People 2020 vision. British Dental Association (May 2003). http://www.bda.org/Images/oral_healthcare_for_older_people_report.pdf (Quotation from page 15, last paragraph; recommendations on page 27.)
- Ev b. Oral Healthcare for Older People 2020 vision: 2012 check-up. British Dental Association (January 2012). http://www.bda.org/Images/older_adults_2012_checkup.pdf (Follow-up information on 2003 recommendations starts on page 3.)
- Ev c. UK Government response to the Health Select Committee report on Dental Services (January 2009). www.official-documents.gov.uk/document/cm75/7532/7532.pdf
- Ev d. UK Government-commissioned review: NHS dental services in England (June 2009). http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_101137
- Ev e. UK Parliament Hansard. HC 1 July 2009, vol. 495, col. 335W; HC deb 14 October 2009, vol. 497, col. 385; HC 3 November 2009, vol. 498, col. 912W.
- Ev f. NHS Dental Contract: Proposals for Pilots. Department of Health (December 2010). https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/153236/dh_122789.pdf.pdf
- Ev g. List of NHS Dental Contract Pilots. Department of Health (June 2013). https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/205828/List_for_publication_-_Final.xlsx
- Ev h. NHS Dental Contract Pilots Early Findings. Department of Health (October 2012). https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/127035/NHS_dental_contract_pilots_early_findings.pdf.pdf
- Ev i. Statement from Head of Dentistry and Eye Care Services at the Department of Health, available on request.
- Ev j. Statement from the Chief Dental Officer for NHS England, Department of Health and Health Education England, available on request.